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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,803	06/15/2000	Mamoru Hirayama	032590-063	9412

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EXAMINER

KANG, JULIANA K

ART UNIT PAPER NUMBER

2874

DATE MAILED: 12/18/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,803

Applicant(s)

HIRAYAMA ET AL.

Examiner

Juliana K. Kang

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 9, 10, 12-17, 19 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 5, 7, 8, 11, 18 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Inventorship

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Specification

3. The disclosure is objected to because of the following informalities: on page 23 line 22, the reference number 230 seems to be incorrect. Note that the reference number 320 is referred to the support member (see lines 19 and 25). Should it be 322? Appropriate correction is required.

Applicant's assistance is requested to correct any other errors that may be noticed in the application.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 9, 12, 13, 17 and 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Holland (U.S. Patent 5,421,930, submitted by applicant).

Holland teaches an optical fiber wiring apparatus providing: A wiring substrate (see Figs. 5-8), a wiring head 17, an optical fiber feed means 14, an optical fiber contact means and XY movement means 18 and an optical fiber affixing means (see column 2 lines 39-41).

Holland's wiring head is a wheel with grooves on it, thus, the bottom of the Holland's wiring head has a hemispherical shape and a guide groove. The top half of Holland's wiring head groove is a pressure groove which is connected to the guide groove.

Holland shows the optical fiber connecting means providing Z-axial direction movement to place the wiring head on the wiring substrate.

Holland's wiring head inherently has a radius of curvature larger than the radius of curvature causing breakage of the optical fiber, since Holland's wiring head is used for guiding the optical fiber.

Holland shows the XY movement means moving the wiring head while the wiring head is positioned outside of the wiring substrate.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland.

Holland discloses the claimed invention except for claimed force. One with ordinary skill in the art would easily recognize that applying too little force would not make the fiber affix to the substrate and too much force would damage the optical fiber. Thus, it would have been obvious to one with ordinary skill in the art at the time the invention was made to use claimed force, since discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claim 14, even though Holland does not teach the rotational reference sensor, Holland does teach that all the movements are controlled by a programmed computer. Thus, one with ordinary skill in the art would recognize a detection system in Holland using a sensor in order to control the movement.

7. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holland and further in view of Brown et al (U.S. Patent 5,365,657).

As described above, Holland teaches claimed invention except the cutting means. Brown et al teaches a cutting apparatus used in a wire circuit board. Brown et

al's invention only discusses laying wire even though in claim 1 of Brown et al recites " a conductor". Some wires used in a printed circuit board are very small, thus it would have been obvious to one with ordinary skill in the art to easily recognize the equivalent technique for laying optical fibers and wires. Thus, it would have been obvious to one with ordinary skill in the art to use Brown et al's cutting apparatus in Holland's invention to provide more flexible optical circuit design when many optical connections to different optical components on the wiring board is required.

8. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al (U.S. Patent 5,365,657).

Brown et al teaches all the claimed limitations however, Brown et al's invention only discusses laying wire even though in claim 1 of Brown et al recites " a conductor". Some wires used in a printed circuit board are very small, thus it would have been obvious to one with ordinary skill in the art to easily recognize the equivalent technique for laying optical fibers and wires.

Allowable Subject Matter

9. Claims 5, 7, 8, 11, 18, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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10. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (703) 305-6259. The examiner can normally be reached on Mondays and Thursday 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (703) 308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3072.


Juliana Kang
December 12, 2001


Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800